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NX Open - Status

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NX Open Product Manager

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Topics

- Roadmap: NX 4 → NX 6
- NX 6 Capabilities:
  - Block Styler
  - C/C++ License Control
  - Events – Part Callbacks and Menuscript Callbacks
  - Consolidated Programmers' Guide
- NX 6 Metrics
  - Stability Metrics
  - Journal Coverage

Topics

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NX 4

Java Support

- Common API Binding
- UF Wrappers for Java
- Journaling – Record

KF Bindings for Common API

- Enhance language binding tools to support KF

Feature Based License Control

- User Function apps no longer require runtime license

License Manager

- Programmatic reserve and release

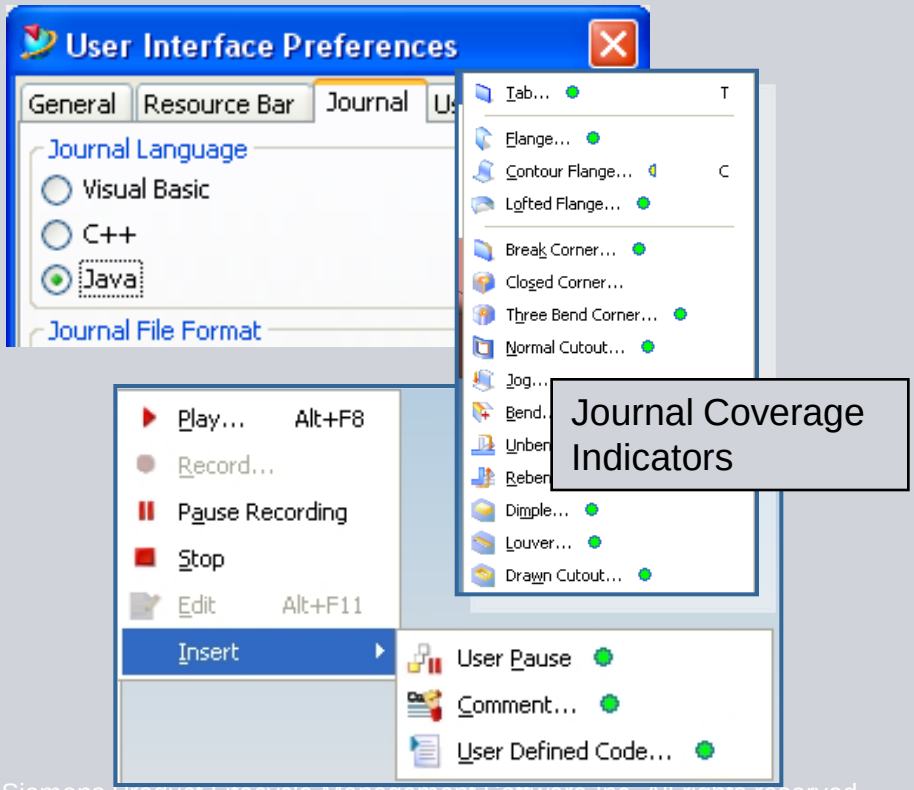
Additional UF Wrappers

- Transformations (**4.0.1)**
- Simple UI tools
- Patterns

Journaling UI Additions

- Language selection
- Insertions for comments, code and pause
- Coverage indicators

Language Selection Preferences



NX 5

UI Styler

- Enhance the UI Styler to create template source files for C, C++, Java, C# and VB .NET
- Enhance the Common API to work with dialogs created with the UI Styler

User Defined Objects (UDOs)

- Enhance Common API to support UDOs
- UDO enhancements

Events

- Enhance the Common API to support UDO, UI Styler and selection events

Call .Net and Java from KF

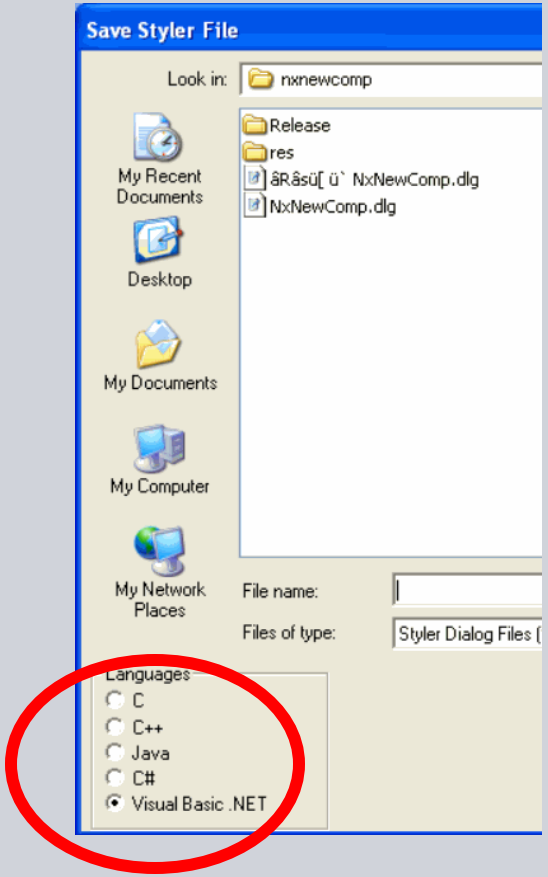
- Enable a KF application to access methods in .NET and Java libraries

Application Signing for C/C++

- Provide a signature utility for C/C++ as exists for .NET and Java

C# Support NX 5.0.1

▸ Journal Record and Playback



UI Styler Language Selection

Block Styler

- New Block Styler application to create block based dialogs
- Generate template source files in all supported languages for block based dialogs
- Enhance common API to work with block based dialogs

C/C++ License Control

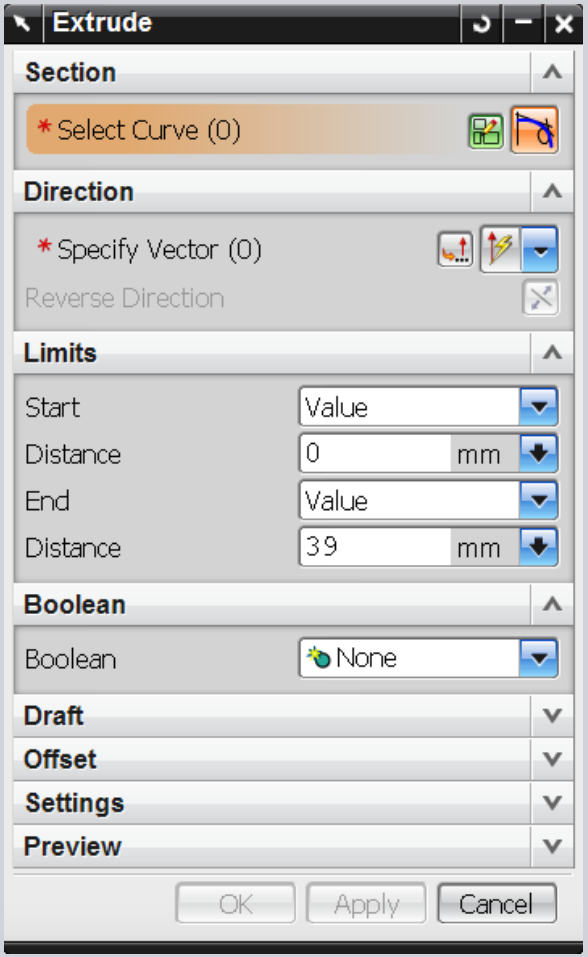
- Implement applications contexts for C/C++

Events Phase 2

- Support menu item events and standard callbacks

Consolidate Programmer's Guides (2006 #1 CIP item)

- Single Common API programmers guide
- General discussion of each topic with examples for all languages



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Block Styler

- A block based dialog is characterized by:
  - Vertical dialog layout
  - Collapsible groups
  - Blocks
  - Each block on its own line

- Groups are collapsible to hide infrequently used commands
- Dialog memory to remember values from session to session
- Automation support in NX6 to allow custom applications inherit look, feel and behavior of NX. .NET, C++, Java and KF support.
- In built features to improve productivity like selection intent, selection scope, design logic etc

Block Styler VS UI Styler

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Block Styler	UI Styler
In-built selection support including selection intent, scope and filter	Programmatically add selection support – cannot add selection intent
Design Logic support in appropriate blocks – Linear Dimension, Angular Dimension	Cannot add design logic
Consistent with NX dialogs - Majority of NX dialogs redesigned as block based dialogs	
Vertical Layout – blocks are in order corresponding to the flow of command	Suitable for almost any layout

Block Styler VS WinForm
Summary of Advantages

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Features	***Block Styler***	***WinForms***
Platform Independent	Yes	No
In Built Selection Support	Yes	No
Design Logic Support	Yes	No
In built support for dynamic drag handles	Yes	No
Consistency with NX dialogs	Yes	No

Block Styler
Selection

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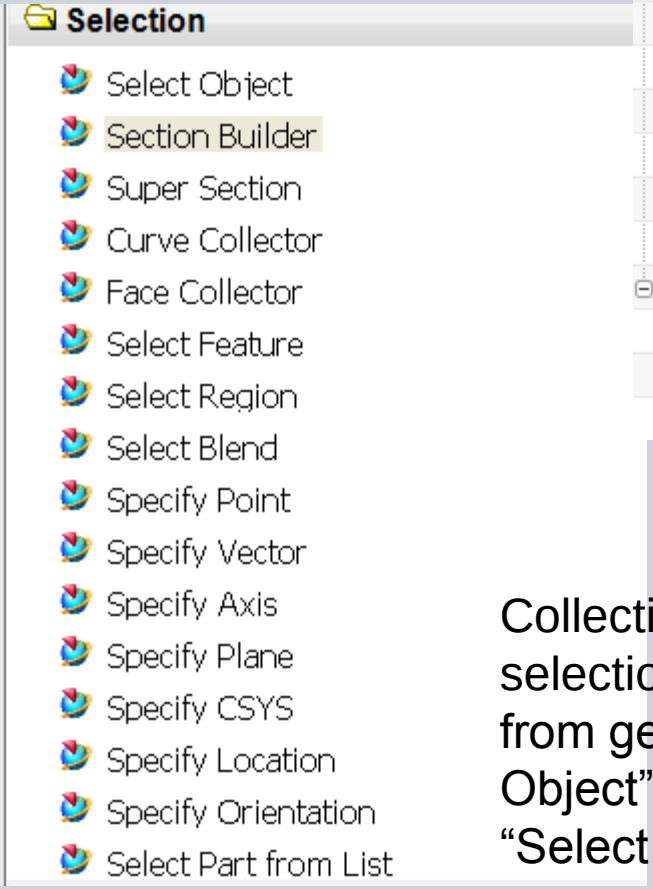

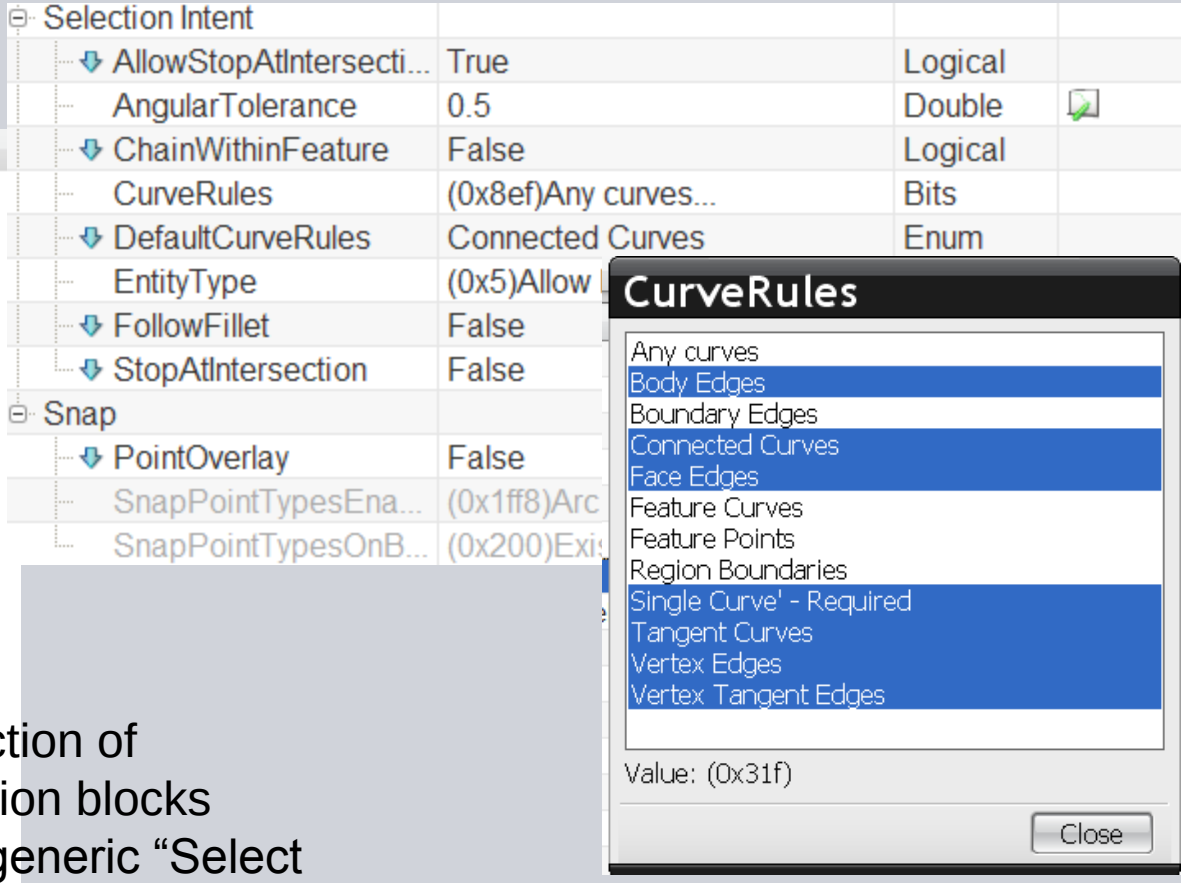

Collection of selection blocks from generic “Select Object” to specific “Select Feature”

In built support for selection intent and Snap point

Block Styler
Block Catalog

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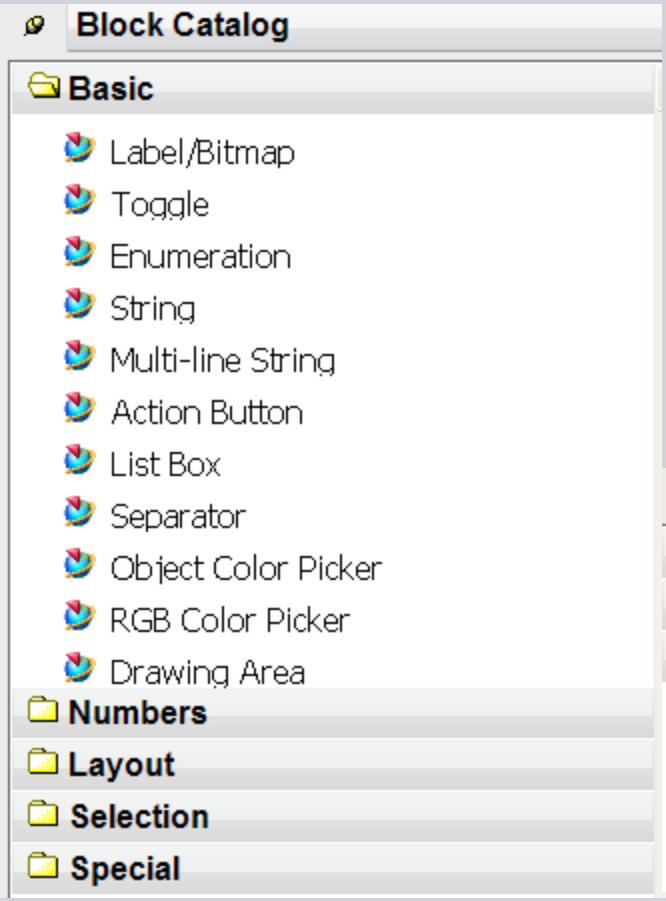
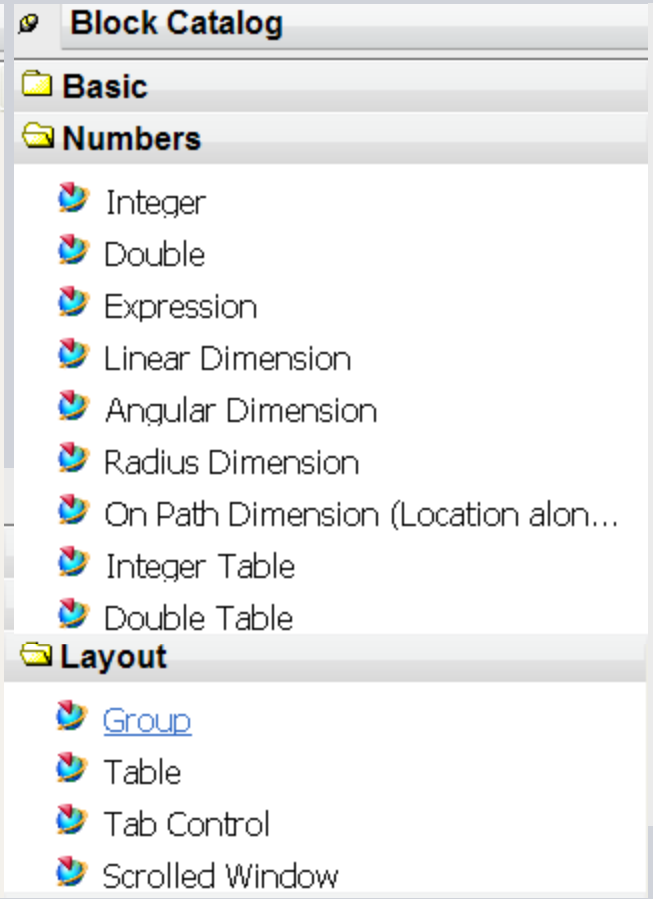
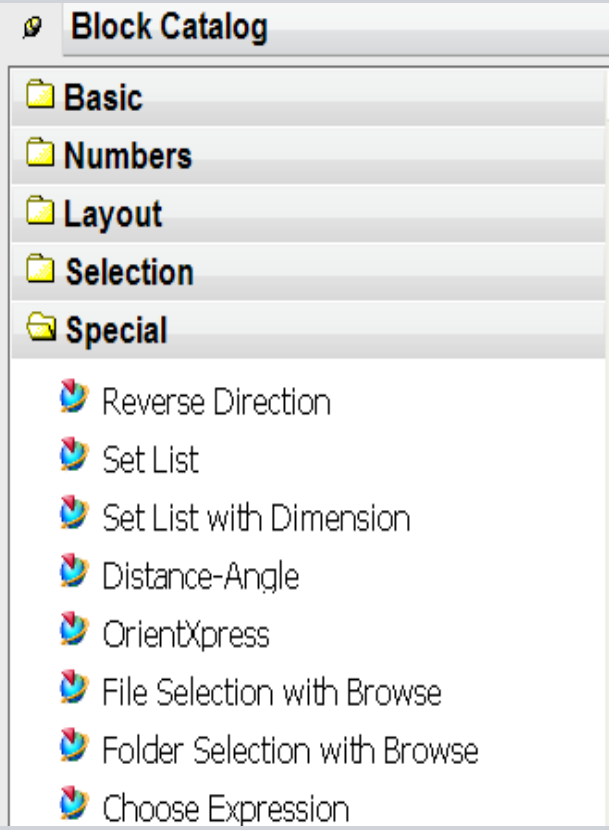
- Huge collection of core blocks:







Block Styler
Design Logic

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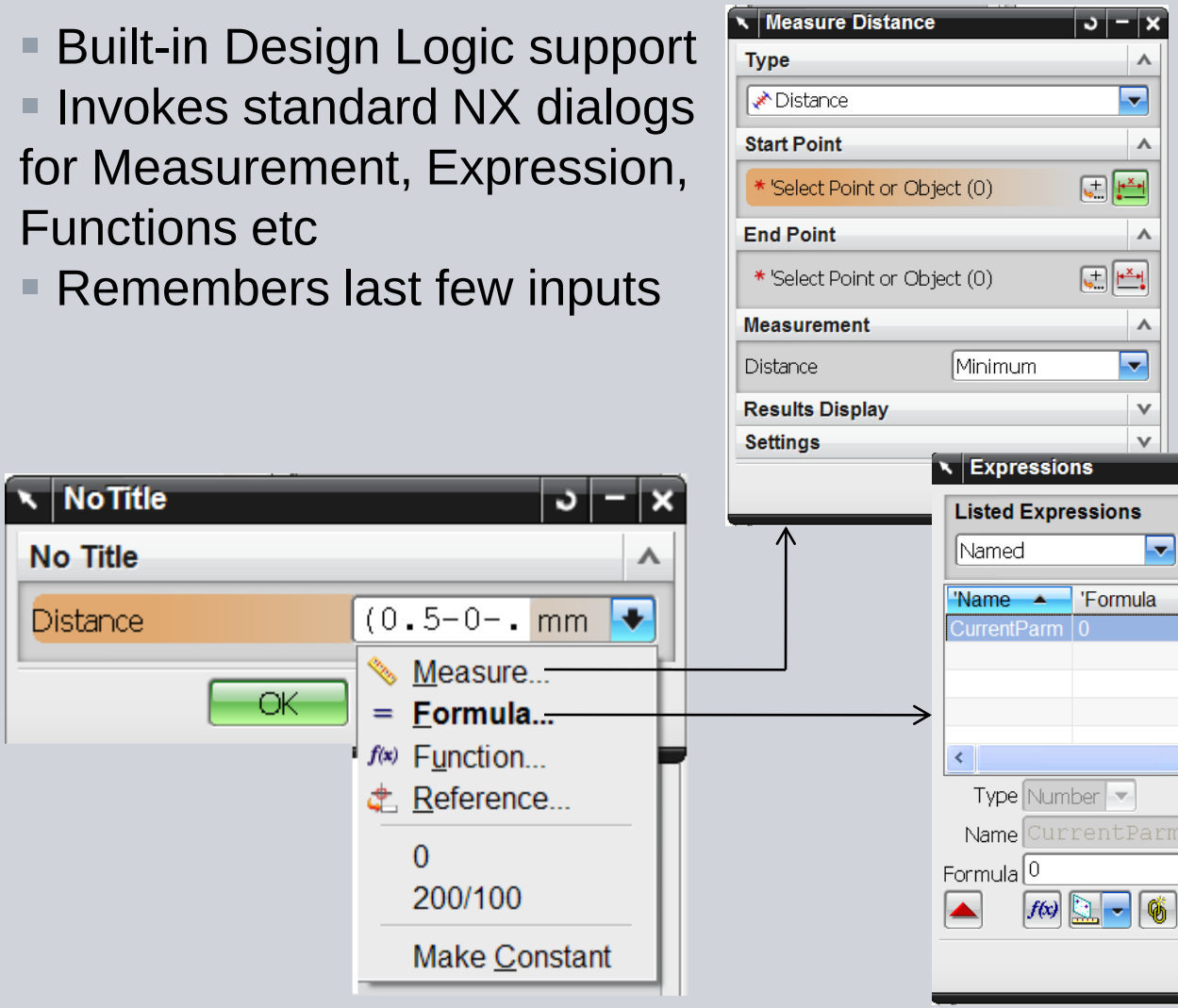
- Built-in Design Logic support
- Invokes standard NX dialogs for Measurement, Expression, Functions etc
- Remembers last few inputs



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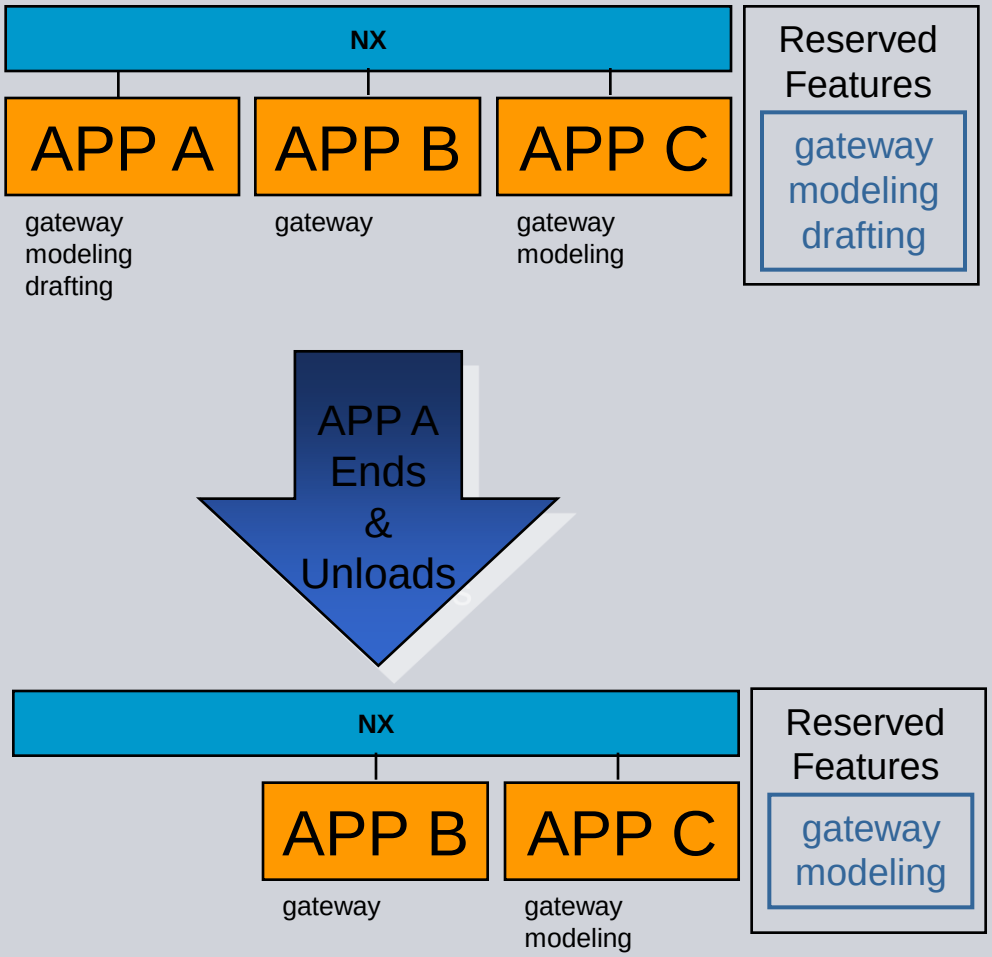
Block Styler - Demo

C/C++ License Control

- Enables a method to maintain license contexts for C/C++ (as is already automatically done for .NET and Java)
- Allows feature licenses to be released automatically when a C/C++ application is unloaded (as is already done for .NET and Java)



C/C++ License Control - Demo

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Events

- Implement methods to support exiting callback functions in .NET and Java
- Implement methods to support existing Menu Script actions from .NET and Java

Event Type	When is event triggered?	Event Object
Create Part	After a new part is created.	The part that has been created.
Open Part	After an existing part is opened.	The part that was opened.
Save Part	After a part is saved.	The part that was saved.
Save Part As	After part is saved as a specified name.	The part that was saved.
Close Part	After a part is closed.	The name of the part that was closed.
Modify Part	After a part is modified for the first time.	The part that was modified.
Rename Part	After a part is renamed.	The part that was renamed.
Change Work Part	After the work part is changed.	The part that used to be the work part and the part that currently is the work part.

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Events

C Prototype	Class Containing new Common API Method	New Common API Method
UF_MB_add_actions	MenuBarManager	AddMenuAction
UF_MB_ask_button_id	MenuBarManager	GetButtonFromName
UF_MB_ask_button_sensitivity	MenuButton	GetButtonSensitivity
UF_MB_ask_button_type_name	MenuButton	GetButtonTypeName
UF_MB_ask_toggle_state	MenuButton	GetToggleStatus
UF_MB_register_application	MenuBarManager	RegisterApplication
UF_MB_set_button_sensitivity	MenuButton	SetButtonSensitivity
UF_MB_set_toggle_state	MenuButton	SetToggleStatus
UF_MB_callback_t	MenuBarManager	ActionCallback
UF_MB_enter_proc_t	MenuBarManager	EnterMenuApplication
UF_MB_exit_proc_t	MenuBarManager	ExitMenuApplication
UF_MB_init_proc_t	MenuBarManager	InitializeMenuApplication

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Events - Demo

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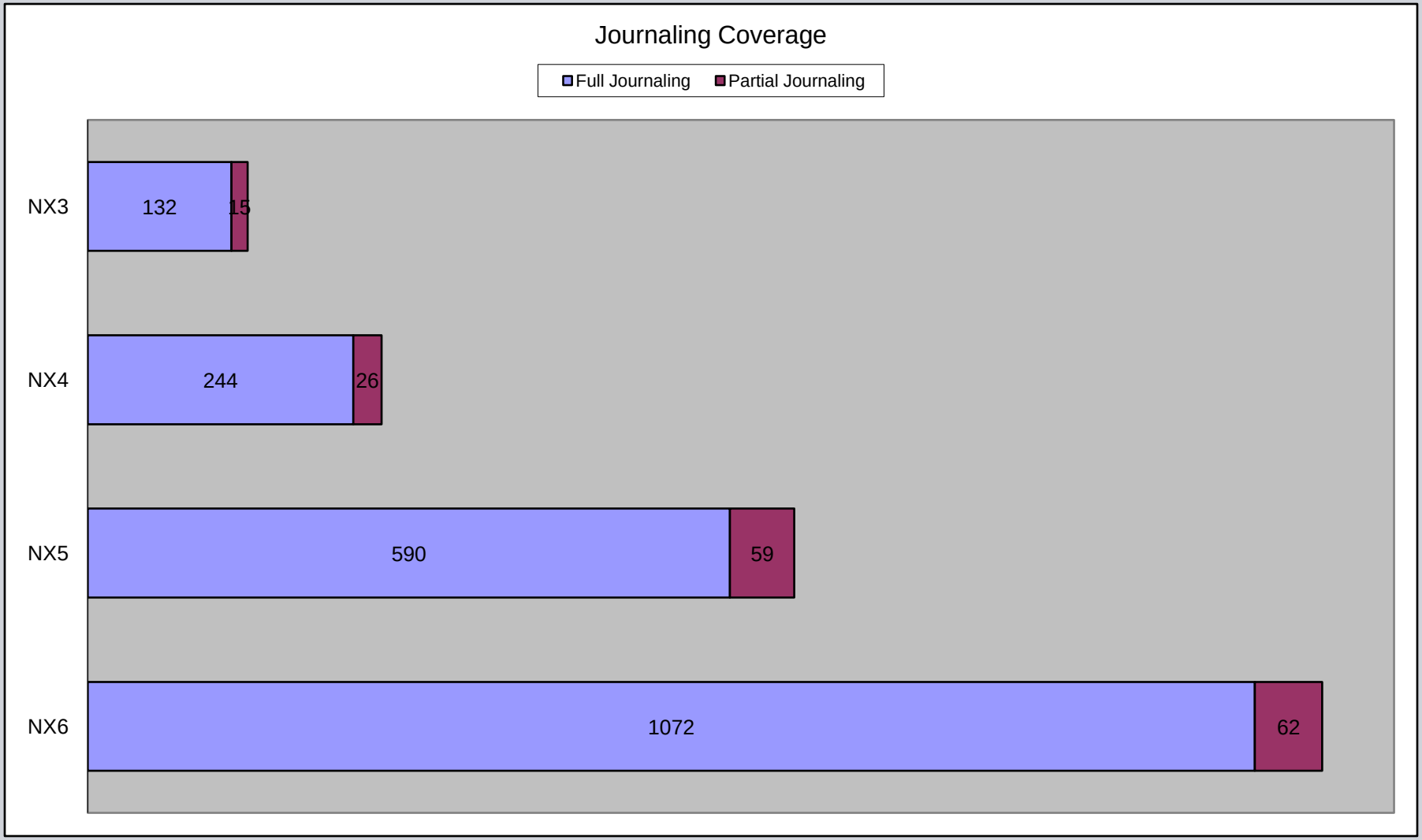
NX 6 Metrics: Stability

NX 6 Metrics: Journal Coverage



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Thank you!

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Back Up Slides

Block Styler:

- Vertical layout with blocks in order corresponding to workflow
- Each item is a block which encompasses semantics and behavior of the command

UI Styler:

- Traditional dialog with almost any layout
- Event based – each item has a corresponding event/s which gets triggered when item is activated